

REMARKS/ARGUMENTS

Claims 1–5 were rejected under 35 U.S.C. 103(a) as being unpatentable over Rabenau et al. (3,561,101) in view of Miyazaki et al. (4,331,286). The Examiner concedes that Rabenau et al. does not state that the heat is brought to a phase transition temperature and below the melting point but asserts that Miyazaki et al. does.

In the present invention, the structure solidifies at the same temperature at which it melts and bonds. This is in contrast to Miyazaki who teaches rapid cooling to avoid formation of additional liquid when two different base metals are bonded. Indeed, as stated in Col 5, lines 66–70 of Miyazaki, “heating is stopped and the bonded surfaces are cooled to prevent the liquid 5 from being further produced at an interface 7 formed by the bonded surfaces, and a high temperature zone of the bonded members 1 and 2 is rapidly cooled (substantially to 200° C.)”. Support for the constant temperature solidification in the present invention can be found on page 15, lines 17–18. Here, it states, “the laminate structure was held at this temperature and pressure for 50 minutes and solidified isothermally as diffusion depleted the copper plating.”

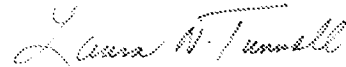
The claims have been amended to capture this unique characteristic of

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isothermal solidification by adding an additional step to each of the independent claims.

Applicant has made a diligent effort to overcome the objections of the examiner and respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

A handwritten signature in cursive script, reading "Laura N. Tunnell".

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